

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001195**Date Inspected:** 03-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 930**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector randomly observed ZPMC welder Hong Shuili ID Number 044815, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved WPS WPS-B-T-2232-TC-U4b-F-1 in the 2G position to weld Flange Plate X7M Weld Joint (WJ) FBOO8-06-045 (SPCM), to Floor Beam Web FB008-06. The QA Inspector randomly observed ZPMC CWI Li Zhijiang, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 300 amps, welding voltage 29.1 volts with a travel speed of 517 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed Carbon Air Arc Back Gouging being performed on the outside of WJ FB016-01-043 attaching Flange Plate X7J to Plate X14A (T=30 mm F2 SPCM) of Floor Beam Web FB016-01. The following photograph provides additional detail.

The QA Inspector randomly observed ZPMC Torch Cutting Operator Ms. Shi Gui Ju, utilizing a Long Wai track mounted Semiautomatic Torch Cutting Apparatus to cut the bevels in Floor Beam Flange Plates X7J, X7K and X7M. The attached photograph provides additional detail.

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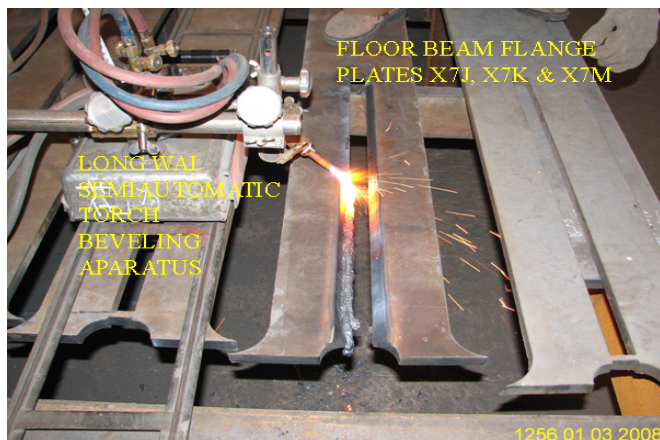
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The QA Inspector randomly observed Carbon Air Arc Back Gouging being performed on the inside of WJ FB008-05-043 attaching Flange Plate X7M to Plate X94A (T=30 mm F2 SPCM) of Floor Beam Web FB08-01. The following photograph provides additional detail.

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to clean the bevels on Floor Beam Flange Plates X7J, X7K and X7M, after the bevels were torch cut.

The QA Inspector randomly observed ZPMC welder Yuan Wensong ID Number 055491, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2132-3 in the 2F position to weld Flange Plate X7H WJ FBO08-06-002, to Floor Beam Web FB008-06. The QA Inspector randomly observed ZPMC CWI Li Zhijiang, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 287 amps, welding voltage 28.2 volts with a travel speed of 419 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector was asked by ZPMC Non Destructive Technician Xue Hai Yong, to verify that Ultrasonic Testing (UT) had been performed on 2 welds on Floor Beam Diaphragm Flanges X5C-4 (WJ FB013-04-042) and X5C-5 (WJ FB004-02-042). The QA Inspector did not witness any actual UT could only verify that WJ's FB013-04-042 and FB004-02-042, had been signed off as accepted by Mr. Xue. The attached photographs provide additional detail.



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Summary of Conversations:

The QA Inspector asked ZPMC CWI Cui Yi Ru why the bevels had been changed to the inside of Floor Beam Flange Plates X7J, X7K and X7M. Mr. Cui informed the QA Inspector that the ZPMC Technological Department had made the change; but there was no explanation given to the QA Inspector as to why the ZPMC Technological Department made the change.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer